

ENGINEER, MAINTENANCE SERVICES, WATER POLLUTION CONTROL (3893)CLASS PURPOSE

Under general direction, performs work of considerable difficulty in directing and supervising all maintenance functions at the Water Pollution Control Plant. Performs professional Mechanical Engineering work relative to major maintenance and construction projects and reviews, designs, and inspects various Water Pollution Control Plant mechanical, electrical, and instrumentation systems. Performs related work as required.

TYPICAL DUTIES AND RESULTS (The position may not include all of the duties listed, nor do the examples cover all of the duties which may be performed.)

Plans, assigns, directs, supervises, and evaluates work of professional and sub-professional employees in meeting the goals and objectives of the Maintenance Division of the Water Pollution Control Department.

Prepares and supervises the preparation of designs, plans, estimates, and specifications relative to Water Pollution Control Plant mechanical, electrical, and instrumentation devices and systems

Implements and ensures the effectiveness of an on-going energy conservation program at the Water Pollution Control Plant.

Consults with engineering contractors and mechanical, electrical, and instrumentation suppliers relative to construction and maintenance projects.

Coordinates engineering, construction, and maintenance projects with engineers, consultants, Maintenance and Operational personnel. Prepares budget for the Maintenance Division.

Investigates, analyzes and resolves mechanical, electrical and instrumentation system problems.

Designs modifications to existing mechanical, electrical and instrumentation systems and directs implementation of modifications so as to improve results and/or reduce operating costs.

Implements and directs a comprehensive computerized maintenance and parts inventory program.

Implements and directs the continued effectiveness of a preventive maintenance program at the Water Pollution Control Plant.

Implements and directs the continued effectiveness of a Water Pollution Control Plant equipment and structures coating program.

Prepares written reports as to effectiveness of existing mechanical, electrical and instrumentation systems and progress reports on Maintenance Division activities.

Attends meetings, gives presentations, and represents department when required.

Typical End Results Include: Ensuring the continuous successful operation of all mechanical, electrical and instrumentation equipment at the Water Pollution Control Plant through a systematic preventive maintenance program, as well as a defined repair and replacement program; providing for decreased energy consumption in new and existing buildings and facilities; ensuring the adequacy and suitability of the design of mechanical systems; and providing for the continuous monitoring of energy consumption in order to prevent wastage.

DISTINGUISHING CHARACTERISTICS

The incumbent of this class reports to the Assistant Director, Water Pollution Control. This class supervises mechanical, electrical and instrumentation maintenance functions at a professional level and is distinguished from the next lower class of General Maintenance Supervisor by assuming broader responsibilities and also supervising and directing all activities associated with the Power and Air Section of the Water Pollution Control Plant.

QUALIFICATIONS

Minimum Knowledge, Skills and Abilities

Knowledge of the current principles and practices of mechanical engineering as they relate to design, construction, and operation of pumps, motors, drives, buildings, heating, air conditioning and ventilating systems, and plumbing systems.

Knowledge of the design, construction, and operation of electrical motors and systems for buildings and facilities, of high-voltage (4160 volt) distribution systems, lighting controls and communication systems.

Knowledge of the principles and practices of management and supervision.

Knowledge of mechanical, electrical and instrumentation maintenance procedures, including preventive maintenance programs.

Ability to plan, assign, direct and evaluate the work of a group of professional and sub-professional employees in major mechanical, electrical and instrumentation engineering projects.

Ability to design modifications for existing equipment, systems, operation hours, and practices in order to reduce costs and consumption of energy.

Ability to coordinate service requirements with utility companies.

Ability to integrate mechanical, electrical, structural, architectural, and instrumentation designs into an overall energy management program.

Ability to conduct difficult engineering research and prepare clear and concise written reports.

Ability to recognize the need for, design, and supervise the installation and/or application of corrosion control systems, including cathodic protection.

Ability to communicate effectively with professional, governmental, civic and business persons and organizations.

Competency Knowledges, Skills and Abilities

Ability to establish and maintain effective working relationships with others.

Training and Experience

Any combination equivalent to graduation from an accredited college or university with a Bachelor's degree in Mechanical Engineering or Electrical Engineering, and five (5) years of progressively responsible professional mechanical or electrical engineering experience in a large manufacturing or industrial operation as a Facilities Engineer.

Licenses/Certificates

Possession of a Certificate of Registration as a Mechanical Engineer or Electrical Engineer, as issued by the State of California, within one year of appointment.

Possession of a valid State of California driver's license as required.